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Priority #	**Steam**	Separate A/P Project Cost	A/P Blanket Cost	Desired Schedule	Notes and Risk/Reason
1	Design Farmhouse Road steam replacement from Pit #1 to the Elephant Walk.	$ 60,000		**FY18**	Capital Projects to assist
2	Replace Steam line in the Farmhouse Road parking area from the Steam Pit (Farmhouse Rd Pit #1) near Merrow Hall to the steam pit at the southwest side of Roosevelt (Farmhouse Rd Pit #3. This will involve pit replacement.	$ 600,000		**FY19**	Multiple failures occurring due to ground water impingement. Repairs are very costly due to depth of pipe. Project will raise pipe out of ground water level.
3	West Side of the Memorial Union from the Elephant Walk to the Bressler Pit including the service to the Union. Continue on the	$ 1,200,000		**FY17/18**	Performance Contract
4	Replace steam and condensate line feeding Browning Hall		$ 50,000	**FY17**	Complwete
5	Browning Steam Pit - Remove old ababndoned piping and valves that are no longer neededafter steam lines to Potter were abandoned. Extraneous piping and valves are sources of leaks.		$ 15,000	**FY17**	Complete
6	Rodman East Steam Pit - Replace hatch doors to upper part of steam pit. The ol;d steel doors are in poor shape and a forklift		$ 20,000	**FY17**	Complete
7	Multi-Cultural Steam Pit - Remove four butterfly valves on both steam and condensate lines that are no longer functional.		$ 15,000	**FY17**	Complete
8	Merrow Steam Pit - Replace trap assembly		$ 5,000	**FY17**	Complete
9	Heathman East Pit - Remove existing ladder; replace mud leg and trap assembly.		$ 5,000	**FY17**	Complete
10	Farmhouse Road Steam Pit No. 1 - Repair hatch door so the hold open function is working		$ 2,500	**FY17**	Complete
11	Bressler Hall - Replace condensate tank (use tank salvaged from Ranger Hall),		$ 10,000	**FY17**	Complete
12	Butterfield Dining Hall - Replace last Steamgard trap in kitchen area with an F&T Trap		$ 2,500	**FY17**	Complete
13	COP Mechanical Room - Repair condensate leak at main condensate tank		$ 2,000	**FY17**	Reliabilty
14	East Hall - Remove manual gate valve upsteam of safety valve, (gate valve handle previously removed)		$ 1,500	**FY17**	Safety issue
15	Adams Hall - Change condensate tank from simplex to adjacent duplex system, install blowoff for steam ; move condensate pipe		$ 8,000	**FY17**	Complete
16	Browning Hall - Re-pipe sensing line for PRV so it is pitched correctly, currently the sensing line is pitched in the wrong		$ 2,000	**FY17**	Complete
17	Tucker Hall - Re-build pressure reducing valve that supplies steam for the domestic hot water system.		$ 3,000	**FY17**	Complete
18	Dairy Barn steam Pit - Replace dirt leg and trap assembly		$ 4,000	**FY17**	Complete
19	Coddington Hall Mechanical Room - Install parallel trap or install larger trap at building entrance, existing trap appears to be		$ 4,000	**FY17**	Complete
20	Burnside Hall Steam Pit - Remove existing rotted ladder rungs; plug up sleeves to reduce ground water infiltration		$ 2,000	**FY17**	Complete
21	Sherman Steam Pit - Remove rotted ladder rungs; seal pipe penetrations, remove 2 blowdown assemblies not required;		$ 4,000	**FY17**	Complete
22	Crib Steam Pit - Change trap to a smaller size; re-grade area around pit so pit curb is 6" above the surrounding area;		$ 3,000	**FY17**	Complete
23	Rodman West pit - Change Trap to a smaller size, remove existing ladder		$ 2,000	**FY17**	Complete
24	Bliss Pit - Repair condensate leak at exterior of pit on north side; remove ladder, seal up pipe penetrations, tackweld		$ 20,000	**FY18**	Reworked in COE Project
25	Quinn Steam Pit - Close up opening between main pit and entrance pit, fill in entrance pit, install new hatch and ladder in		$ 50,000	**FY18**	In Progress
26	Uncover steam pit east of Memorial Union		$ 10,000	**FY17**	Complete
27	East Hall Steam Pit - Repair hatch cover that is not closing tightly		$ 3,000	**FY17**	Complete
28	Swan Steam Pit - Core two holes for electrical conduit for sump pump inside pit		$ 1,500	**FY17**	Reliability issue
29	Replace steam line between Merrow and Tucker Residence Halls Install new manhole outside of Merrow.	$ 200,000		**FY20**	
30	Design and build a new steam service and condensate return line to Aldrich, Burnside and Coddington.	$ 500,000		**FY19**	Numerous repairs and continued pipe failure. Could be in conjunction with the building upgrades currently
31	Replace section of steam line from Farmhouse Road Pit #3 to the Elephant Walk. This would be a continuation of the Farmhouse Road Steam Line replacement project.	$ 500,000		**FY19**	Heat signature showing up on the ground. Indicates insulation failure and ground water impingement.
32	Replace and rework upper college steam main feeder from steam plant.. Insulation failure on jacket.		$ 50,000	**FY19**	Reliability risk. Difficult to access due to location. Will repipe to provide easier access in future.

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33	Replace Steam and condensate line from the Elephant walk steam pit located to the north west of the Memorial Union	$ 1,000,000		**FY19**	Failed Condensate line. Steam Line due to age could be close behind.
34	Replace Fogarty Steam and Condensate Line (Might look at alternate way to provide heat such as gas boiler.)	$ 1,000,000		**FY19**	Anticipated need due to age. **Noresco to look at options as part of the Project 9 Audit.**
35	Replace steam and condensate piping from the Browning steam pit to Fayerweather Hall	$ 250,000		**FY20**	Existing piping is in poor shape
36	Relocate steam and condensate piping where 35kV duct bank was installed parallel and directly above the steam piping	$ 200,000		**FY19**	Reliability issue
	Total Estimate	**$ 5,510,000**	**$ 295,000**		

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	Water				
1	Specifications for the redevelopment and enhancements to Well #3.	$ 25,000		**FY17**	Complete
2	Redevelop, rescreen and reline Well #3 to ensure continued capacity and availability. Build new well house and repipe main through Well #4 for better treatment control.	$ 750,000		**FY17/18**	In Progress
3	Recondition Water Tank -Repair and Repaint Remidiate Lead in the soil. (Needs Design Specifications)	$ 2,000,000		**FY19**	Design in FY18 - Construction funded for FY19
4	Replace service to East Farm Building 14 for the aquaculture systems		$ 30,000	**FY18**	
5	Replace galvanized water services to east farm buildings.		$ 40,000	**FY18**	
6	Repair meters at Eddy, Wiley, Ryan and Boss		$ 15,000	**FY17**	Complete
7	Cut and cap abadoned CI water main at 6" in Butterfield Road		$ 8,000	**FY17**	Complete
8	Cut and Cap abadoned 4" CI water service to Butterfield Hall		$ 8,000	**FY17**	Complete
9	Cut and cap abandoned 2" CU water service to U Club		$ 8,000	**FY17**	Improve water quality and minimize leaks.
10	Feed Aldrich Domestic from Fire Line		$ 4,000	**FY18**	Improve water quality and minimize leaks.
11	Replace service valve to Athletic Field Maint Bld		$ 2,500	**FY18**	Allow shut off to building
12	Install new service to Transition Center		$ 12,000	**FY18**	Prep for Frat Circle Upgrade
13	Modify backflows in location without drains, multiple projects.		$ 100,000	**FY18**	Prevent flooding of buildings
14	Replace 6" CI main from Library to Roosevelt. Abandon old service		$ 30,000	**FY20**	Improve flow and water quality
15	Update and increase the size of the water line in Fraternity circle. Loop new line around Fraternity Circle connecting at intersection of Weldin Hall and Chi Phi. Add Fire Hydrant to the west side.	$ 750,000		**FY19**	Fire safety and additional capacity for new sprinkler systems being installed in the Fraternities and Sororities
	Total Estimate	**$ 3,525,000**	**$ 257,500**		

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	Electric				
1	Update Sub 3 tie in to Peckham/Grad Village - Repairs needed. **Will perform through the Audet Blanket.**		$ 50,000	**FY17/18**	Reliability, insulators and cutouts are damaged and tired
2	Improve electric reliability for the Swan Edwards Ranger and Green Hall Area. Install feeder protection and switching capability		$ 50,000	**FY18**	Resiliency improvements
3	Install feeder protection and switch at the Mallon Center for feeder 1-1 and 1-3 resiliency and feeder selection options.		$ 50,000	**FY18**	
4	Update Campus Avenue Overhead lines feeding International House and Dispatch.		$ 30,000	**FY17**	Complete
5	Replace switch at Library. Provide feeder protection and redundancy for feeder 1-1 and 2-1.		$ 50,000	**FY18**	Resiliency improvements
6	Provide Feeder redundancy for feeder 1-2 by installing switch at Roosevelt Hall and connecting to the Library feeders.		$ 50,000	**FY18**	Resiliency improvements
7	Replace Transformer at White Hall due to age.		$ 30,000	**FY18**	Deteriorated condition needs replacement for better reliability.
8	Design Generator Resiliency Project	$ 150,000		**FY18**	Resiliency effort, Outage functionality
9	Remove overhead transformers at water system supply wells and replace with underground feed from pad mount transformer.		$ 10,000	**FY17/18**	Environmental hazard(eliminates oil tanks in vicinity of 30 acre pond), Lessen outage risk at wells by eliminating overhead lines.
10	Replace and update sub-meters at all buildings behind the electrical master meter.	$ 1,000,000		**FY17/18**	Reliability of Information for billing purposes and energy conservation initiatives.
11	Replace Treansformer at CPRC due to age.		$ 30,000	**FY18**	Possible oil beginning to weep through housing.
12	Provide new electric services, transformers, switches and generators to Fayerweather/Gorham, Dorr, Ellery, Hopkins, Burnside, Cossington and Aldrich	$ 6,000,000		**FY18**	Safety and Code Compliance (Possible HRL Bond Money)
13	Implement Generator Resiliency project	$ 1,500,000		**FY18**	Resiliency effort, Outage functionality
14	Replace transformer at Library and outside gear	$ 150,000		**FY19**	Deteriorated condition needs updating for reliability
	Total Estimate	**$ 8,800,000**	**$ 350,000**		

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	Natural Gas				
1	Replace gas main from Complex Rd to Butterfield Dining			**Complete**	Serious leaks were repaired four years ago. Pipe condition was poor. Safety Issue **This is included as part of the Butterfield Ding Expansion. If the project gets delayed this must be done in July/August of FY15**
2	National grid to take ownership of the Greenhouse Master meter on Upper College Road and the Master meter at Briar Lane along with the distribution piping.	$ 50,000		**Paid For in FY15 Completion in FY18**	Safety/Risk Risk and liability are far greater than any other utility. Under review by Ngrid. Awaiting pipe integrity test results.
3	Leak Detection/System Inspection		$ 10,000	**FY18**	Ongoing Compliance, Every Three Years.
4	Implement National Grid take over of the gas service to the enire **Kingston Campus.** Would involve some installation of new gas services and lines currently serving buildings.	$ 500,000		**FY18**	Safety/Risk Risk and liability are far greater than any other utility.
5	Implement National Grid take over of the gas service to the **East Farm and the Narragansett Bay Campus**. Would involve some installation of new gas services and lines currently serving buildings.	$ 100,000		**FY18**	Safety/Risk Risk and liability are far greater than any other utility.
	Replace malfuncting submeters		$ 20,000	**FY17**	Complete
	PUC survey Compliance review repairs		$ 10,000	**FY17**	
	Total Estimate	**$ 650,000**	**$ 40,000**		
	Storm Water				
1	Design project to create a holding pond and reconstruct pipe crossing Butterfield road from the brook feeding Roger Williams pond along Hope Commons.	$ 100,000		**FY18**	Restriction creates flow issues that damage landscape, roadways and structures.
2	Edwards Hall need roof leder replacement to be effective in storm water control		$ 46,000	**FY17**	Complete
3	Ranger Hall needs roof leder replacement to be effective in storm water control		$ 35,000	**FY17**	Complete
4	Quinn Hall needs roof leder replacement to be effective in storm water control		$ 25,000	**FY17**	Prevent moisture, mold in basements and reduce ground erossion
5	Stormwater system survey		$ 50,000	**FY17**	Now that we have more reliable maps we can input condition data into the data base and track priority improvements. Survey is needed for this step.
6	Investigate and develop a plan for Hopkins Hall Groundwater control (Capital Projects?)	$ 50,000		**FY18**	Once the Electrical system project is completed it would be in the best interest of health and safety if this groundwater issue was mitigated.
7	Repipe west side of quad feeding into the Hammerschlag Mall	$ 250,000		**FY19**	Pipe restrictions create storm water overflow, errosion and building/Landscape damage
8	Replace Stormwater line down Elephant Walk due to size restrictions. Increase diameter.	$ 150,000		**FY19**	Pipe restrictions create storm water overflow, errosion and building/Landscape damage
9	Construction of holding pond and redesign of crossing of the campus stream into Roger Williams Pond. **Capitol Projects has in design.**	$ 1,000,000		**FY19**	Pipe restrictions create storm water overflow, errosion and building/Landscape damage
10	Connect roof leader piping into closed drainage system at Merrow Hall		$ 25,000	**FY18**	Pipe restrictions create storm water overflow, errosion and building/Landscape damage
11	Connect roof leader piping into closed drainage system at Tucker Hall Hall		$ 25,000	**FY18**	Pipe restrictions create storm water overflow, errosion and building/Landscape damage
12	Connect roof leader piping into closed drainage system at Peck Hall		$ 25,000	**FY18**	Pipe restrictions create storm water overflow, errosion and building/Landscape damage
13	Connect roof leader piping into closed drainage system at Hutchinson Hall		$ 25,000	**FY18**	Pipe restrictions create storm water overflow, errosion and building/Landscape damage
14	Connect roof leader piping into closed drainage system at Roosevelt Hall		$ 50,000	**FY18**	Pipe restrictions create storm water overflow, errosion and building/Landscape damage
15	Gateway Apartments Drainage		$ 50,000	**FY19**	Pipe restrictions create storm water overflow, errosion and building/Landscape damage
16	Fraternity Circle Drainage		$ 50,000	**FY19**	Pipe restrictions create storm water overflow, errosion and building/Landscape damage
17	Hydrology study for whitehorn and peckham				Place holder
	Total Estimate	**$ 1,550,000**	**$ 406,000**		
	Sewer				
1	Repipe tootell sump pumps into sewer line outside of building (Capital Projects?)	$ 100,000		**FY17**	Compliance regarding discharge of waste water
2	Design replacement of sewer line from the Welcome Center on Upper College Road to Carlotti.	$ 50,000		**FY17**	Blockages regularly occur due to poor flow, root and poor pipe conditions.
3	Replace sewer line from Upper College Road to Carlotti.	$ 500,000		**FY19**	Blockages regularly occur due to poor flow and ristrictions.
4	General pipe repairs and replacement in system		$ 100,000	**FY18/19**	
5	Replace Taft Hall Line and Update Hammershlag Mall MH		$ 45,000	**FY17**	Complete
6	Ballentine Service Line Repair		$ 6,000	**FY17**	Complete
7	Manhole Cleaning and Repair		$ 50,000	**FY17/18/19**	
8	Camera Inspection of sewer System		$ 50,000	**FY17/18/19**	
9	Install Sewer Service Manhole at Peckham Farm		$ 10,000	**FY18**	

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10	Design and construct lime treatment system at Steam Plant	$ 100,000			Prevent build up of scale in sewer lines leaving plant.
	Total Estimate	**$ 750,000**	**$ 261,000**		

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	Waste & Recycling				
1	Back up vehicle for trash/recycling dump truck **(Could be vehicle used for lands and grounds but would have to have the extra vehicle avaiable)**	$ 35,000		**FY17**	Age of existing truck dictates the need for coverage during periods when truck is in for service.
2	Transfer station design	$ 50,000		**FY18**	Increased waste separation and the need to consolidate the collection of all types of waste and recycling materials. The need for a consolidation of collection areas. Areas of concern - Trash, metal, wood, yard waste, used pallet storage, mattresses, white goods, books, clothing,general recycling, e-waste, lamps, batteries, ballasts.
3	Centralization of dumpster locations. Develop program and modify campus method of trash and recycling collection. Build collection areas for compactors etc.	$ 100,000		**FY18**	Improve operation efficiencies and campus appeal
4	Compost facility and program would include construction and possible additional part time employees	$ 50,000		**FY18**	Possible solution for food waste with waste management but yard waste and animal waste needs still exist.
5	Transfer station construction	$ 500,000		**FY19**	
	Total Estimate	**$ 735,000**			
	Total Utility Priority List Estimate	**$ 19,970,000**	**$ 1,609,500**		